Editorial

In this issue of Pointer, we are pleased to present our top three prize-winning essays from the 2015/2016 Chief of Defence Force Essay Competition (CDFEC). Our top prize-winning essay, entitled 'Finding SAF's Place in the Cyber Age' is by MAJ Sebastian Xu. MAJ Xu highlights that as cyber space can no longer be ignored and is now widely recognised as a fast-expanding domain of modern warfare, militaries around the world are faced with a very serious threat they need to grapple with. This can be seen from the escalating frequency and devastating scale of cyber attacks in recent years—even countries such as Russia and the United States (US) have fallen victim to cyber attacks. MAJ Xu emphasises that because of the nature of cyber attacks, the rules that generally govern modern warfare in domains such as land, air, sea and space will not apply in the cyber domain. As Singapore becomes increasingly connected and cyber operations become increasingly sophisticated, MAJ Xu feels that the Singapore Armed Forces (SAF) can take the lead in building a concerted Whole-of-Government network that can act and respond flexibly in strengthening Singapore's cyber security. By being part of a strong cyber defence network that is better able to deal with cyber attacks, MAJ Xu believes that the SAF can then fulfil its mission of enhancing the peace and security of Singapore.

LTA Julie Lim Yee Sin's 'The Value of Sustainability for the SAF' is the second prize-winning essay. This essay explores the inherent link between sustainability and national security, and discusses what sustainability means for the SAF. According to LTA Lim, the SAF is instrumental to Singapore's development—not only in enhancing security, but also in contributing to the community. In the face of emerging security threats, SAF operations have evolved beyond a traditional defence role. By investing in resource sufficiency and impact management, the SAF can embrace the uncertainties of our complex security landscape and better position itself to protect Singapore's national interests. LTA Lin's concludes that achieving this, however, is no mean feat. Besides utilising technology as a tool to enhance sustainability, the SAF ultimately requires

innovation and the collective effort of its people to drive any changes. If we see these processes through the eyes of sustainability and find the means to streamline them, via the strategies discussed or otherwise, the SAF is well underway to start enhancing sustainability and optimising performance. The value of sustainability for the SAF, and consequently, for Singapore, is priceless.

The third prize-winning essay entitled 'Maritime Terrorism Threat in Southeast Asia and its Challenges' is by ME6 Joses Yau Meng Wee. MAJ Yau highlights that the threat of terrorism is always present, but the public was only given a wake-up call to the devastating impacts of terrorism after the September 11 attacks in the US. Since then, many countries have stepped up their counter-terrorism efforts and measures. MAJ Yau examines the terrorism threat in Southeast Asia, exploring the possible scenarios of a maritime terrorist attack in the region and assesses the region's counter-terrorism efforts that have been put in place. He analyses the efforts of the Association of Southeast Asian Nations (ASEAN) in fighting terrorism and acknowledges that confidence-building measures, shared intelligence, capacity building and enhancing interoperability have been effective in deterring, detecting and disrupting maritime terrorism. MAJ Yau also introduces an Opportunity, Capability and Intent (OCI) framework as a useful way of doing threat assessments, to further anchor his argument that the terrorism threat in Southeast Asia remains a clear and present danger.

Besides presenting the top three prize-winning essays from the 2015/2016 CDFEC, we are also pleased to feature three essays whose topics range from the future of airpower to a design of multi-domain command and control information systems to social intelligence and motivation theories.

The essay, 'Unmanned Aerial Vehicles and the Future of Airpower: A Technological Perspective' is written by ME4 Gerald Goh Qi Wen. In this essay, ME4 Goh aims to give

a technological perspective of the future of airpower, as well as a detailed analysis of unmanned aerial vehicles' (UAV) role in operations today and its potential advantages and disadvantages. According to ME4 Goh, since the invention of the aeroplane by the Wright Brothers in 1903, developments in aerial space, particularly in airpower, have moved at a rapid pace. For countries whose militaries have developed a competent air force, airpower gives them a myriad of capabilities to protect their country's air space and security, such as the ability of airpower to access targets beyond the capabilities of the army and navy and to effectively destroy key infrastructure or high value targets with its penetration and range. ME3 Goh concludes that UAVs will eventually take over manned platforms in the second half of this century when the technologies for Unmanned Combat Aerial Vehicles (UCAV), unmanned strategic bombers and even unmanned helicopters and tanker/transport are expected to mature. He further adds that this future is dependent on the willingness of military forces and political governments to expand the roles of UAVs which will in turn drive their research and development, leading to UAVs which will eventually match, and even surpass manned platforms in performance and efficiency.

ME5 Chua Zhongwang's essay on 'Framework for Identifying Requirements in the Design of Multi-Domain Command and Control Information System for Tri-Service Integration' examines the challenges in designing a Command and Control Information System (CCIS) that shortens the Observe-Orientate-Decide-Act cycle for an integrated Armed Force. This involves the co-ordination of air, land and sea assets of the Armed Forces, as well as cyber security necessary to ensure the robustness and resilience of the system. In this essay, ME5 Chua explores the mission-domains requirements of the CCIS and the impact of the environment and tactical operations at the different air-land-sea physical domains. He also proposes a framework in the Requirement Analysis to achieve comprehensive requirements for CCIS system design across multi-domain operations.

The essay, 'Social Intelligence and Motivation Theories in Transforming the RSAF' is written by CPT Varun Kumar Rai, LTA Benjamin Tong Yong Wei & LTA Dustin Jee Kam Chin. The authors highlight that the working culture in the Republic of Singapore Air Force (RSAF) started out as a hierarchy culture, like most militaries. However, given the recent technological advances and shifts towards a more integrated and interdependent military, there has been a notable shift towards a somewhat clan culture. This essay aims to explain the shift in culture and its potential merits. It also aims to critically view the place that social intelligence has in this new culture and the roles that different motivational theories may have on the individual. The authors also feel that an understanding of motivational theories will allow the RSAF to keep her people on the 'edge of their seat', maintaining a healthy balance between the two extremes of staying stagnant due to being unmotivated and complacent from too much motivation. The authors also feel that having a deep understanding of motivation will help build a cohesive and nurturing working environment for the RSAF.

The POINTER Editorial Team